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FOCUSED SITE INSPECTION PRIORITIZATION
SITE EVALUATION REPORT

MAPCO, INC.
INDIAN POINT ROAD
ATHENS, ILLINOIS

CERCLIS ID NO.: ILD042849547

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SITE ASSESSMENT SECTION
77 West Jackson Boulevard
Chicago, Illinois 60604

Date Prepared:	August 31, 1995
U.S. EPA Region:	5
Contract No.:	68-W0-0037
Technical Direction Document No.:	T05-9503-205
Prepared by:	Ecology and Environment, Inc. Chad Eich
E & E Program Leader:	Steven Skare
Telephone No.:	312/663-9415

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1. INTRODUCTION

The Ecology and Environment, Inc., (E & E) Technical Assistance Team (TAT) was assigned by the United States Environmental Protection Agency (U.S. EPA), under Contract No. 68-W0-0037, Technical Direction Document (TDD) T05-9503-205, to evaluate the Mapco, Inc., site (Mapco) in the city of Athens, Menard County, Illinois, as a potential candidate for the National Priorities List (NPL). E & E performed Focused Site Inspection Prioritization (FSIP) activities for the site to determine whether, or to what extent, it poses a threat to human health and the environment, and has prepared this FSIP report. This report presents the results of E & E's evaluation and summarizes the site conditions and targets pertinent to the migration and exposure pathways associated with the site. Information was obtained from U.S. EPA and Illinois Environmental Protection Agency (IEPA) files, as well as through interviews with facility representatives, and an on-site reconnaissance inspection on April 25, 1995.

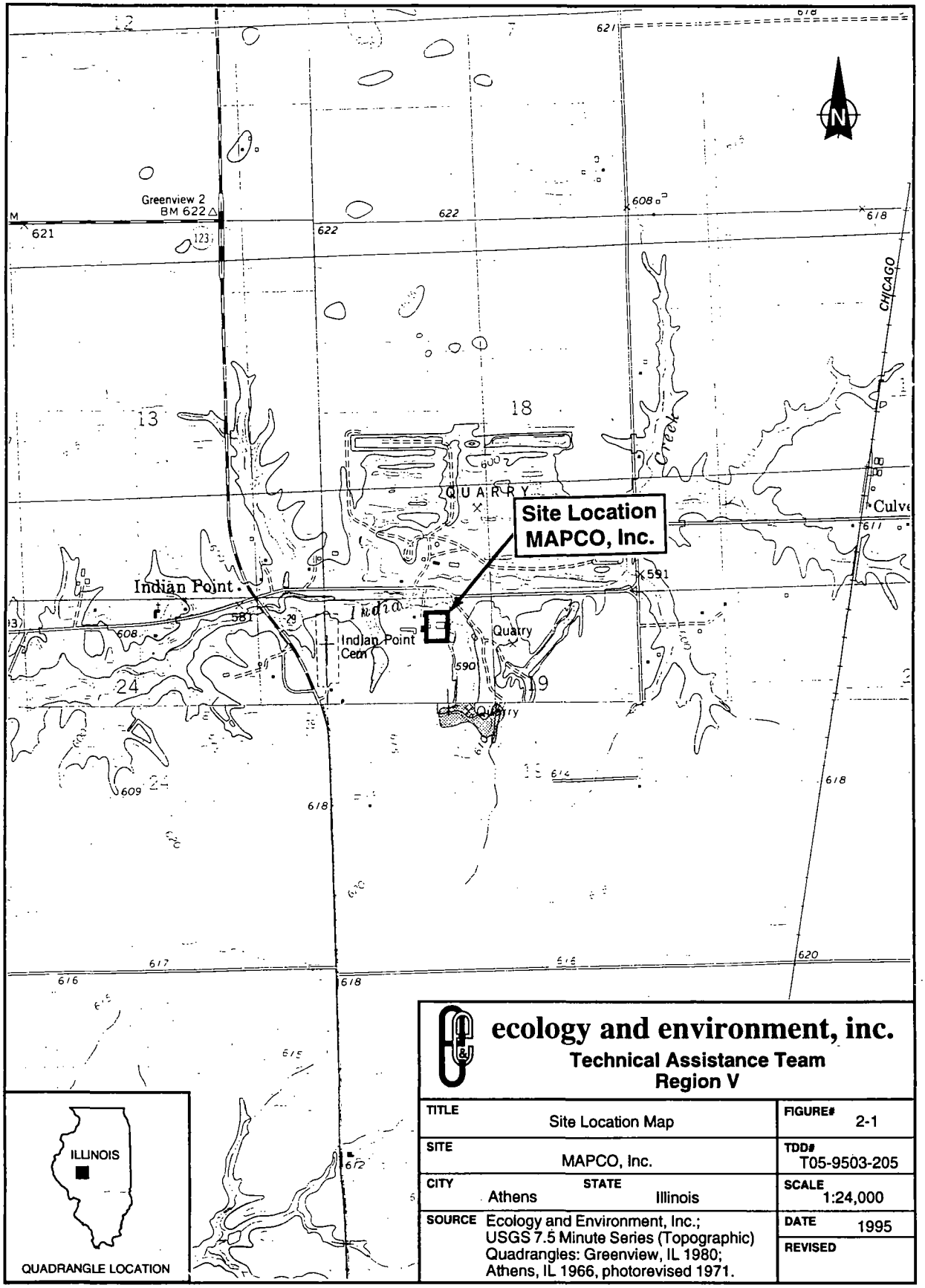
This report is organized into six sections, including this introduction. Section 2 describes the site and provides a brief site history. Section 3 provides information about previous investigations conducted at the site. Section 4 provides information about the four migration and exposure pathways (groundwater migration, surface water migration, soil exposure, and air migration). Section 5 is a report summary. References used in the preparation of this report are listed in Section 6.

2. SITE DESCRIPTION AND HISTORY

The Mapco site is located at Rural Route No. 2, Indian Point Road, in the city of Athens, Menard County, Illinois (NW1/4 NW1/4 sec. 19, T. 18 N., R. 5 W.). The coordinates for the site are at latitude 40°00'08" N and longitude 89°42'35" W (E & E 1990). Mapco, Inc., is an active agricultural products dealer that sells, mixes, and applies fertilizers, pesticides, and herbicides, as well as sells propane gas. The site is located in a rural area, where the predominant land use is agricultural. The Mapco site is bordered by Indian Point Road to the north, a quarry lake to the east, and farmland to the south. West of the site is a commercial business, Precision Tank & Equipment, Inc. (PT & E), a private residence, and farmland. An active quarry is located northeast of the site. The site is located approximately 2.5 miles north-northwest of the city of Athens, Illinois, and is situated on approximately 5 acres of land, which Mapco leases from Mr. Loren E. Hopwood, the property owner. See Figure 2-1 for site location. Mapco's business operations cover approximately 1 of the 5 acres. The topography of the site is generally flat, with the eastern border of the site sloping steeply towards the adjacent quarry lake, the nearest surface water body. The quarry lake is also located on property owned by Mr. Hopwood. The site features are shown in Figure 2-2. The site currently consists of an office building, a mixing building, two storage warehouses, an aboveground storage/mixing tank area, and a truck filling area. The southern portion of the site is used to store propane tanks of various sizes. The former on-site lagoon was located approximately 140 feet southeast of the truck filling area.

The site is unfenced and access is not restricted. The site is generally unvegetated, and consists primarily of soil covered with gravel.

Mapco, Inc., is an active agricultural chemical dealer, and has operated at the site since 1968. The facility was operated by Indian Point Farm Supply from 1955 to 1968, when the company was sold to Mapco, Inc. Indian Point Farm Supply was owned and operated by



ecology and environment, inc.
Technical Assistance Team
Region V

TITLE	Site Location Map	FIGURE#	2-1
SITE	MAPCO, Inc.	TDD#	T05-9503-205
CITY	Athens	STATE Illinois	SCALE 1:24,000
SOURCE	Ecology and Environment, Inc.; USGS 7.5 Minute Series (Topographic) Quadrangles: Greenview, IL 1980; Athens, IL 1966, photorevised 1971.	DATE	1995
		REVISED	

3. PREVIOUS INVESTIGATIONS

The site was initially discovered when IEPA received a complaint from a former Mapco, Inc., employee in 1977 (IEPA 1977). The complaint stated that rinsewater from fertilizer and herbicide trucks was being discharged to the ground and was allowed to flow into a quarry lake located east of and adjacent to the Mapco site. IEPA conducted a site inspection in 1977 and found a 4-inch pipe leading from a drain in the truck loading area to the quarry lake. The drain collected product spillage and directed it towards the lake. The discharge to the quarry lake was sampled by IEPA and found to contain 0.24 microgram per liter (μg/L) of the herbicide alachlor (Lasso) and 14.0 μg/L of the herbicide Atrazine. IEPA stated that this discharge was in violation of Section 12(a) of the State's Environmental Protection Act, and that the violation should be corrected immediately (E & E 1990).

A second IEPA inspection of the Mapco site was conducted in 1980 in response to an inquiry from a local newspaper reporter regarding an unpermitted wastewater lagoon on site. IEPA observed the lagoon, which reportedly received rinsewater and spillage from the truck loading area and discharge from the Mapco, Inc., plant's septic tank (E & E 1990). Mr. Hopwood, the site owner at the time of E & E's SSI, stated that when the lagoon was full, the contents were pumped onto a field located south of the site, which was also owned by Mr. Hopwood. A surface water sample was collected from the lagoon and was found to contain the herbicide Lasso at a concentration of 2,200.0 μg/L (IEPA 1980). A sample of process water from the Mapco, Inc., plant, supplied by the quarry lake, was also collected and found to contain Lasso at 15.0 μg/L.

In a 1981 letter to Mr. Hopwood, IEPA stated that Mapco, Inc., was in violation of the Illinois Pollution Control Board's rules regarding the construction of a wastewater storage lagoon and also for pumping the wastewater to the field without a permit (E & E 1990). In 1984, IEPA conducted several inspections at the Mapco site, and generally, no violations were noted. On one occasion, IEPA observed a fertilizer application truck circling the Mapco

4. MIGRATION AND EXPOSURE PATHWAYS

This section describes the four migration and exposure pathways associated with the Mapco site. Section 4.1 discusses the groundwater migration pathway; Section 4.2 discusses the surface water migration pathway; Section 4.3 discusses the soil exposure pathway; and Section 4.4 discusses the air migration pathway.

4.1 GROUNDWATER MIGRATION PATHWAY

This section discusses regional geology and soils, groundwater releases, and targets associated with the groundwater migration pathway at the site.

4.1.1 Geology and Soils

The Mapco site is underlain by glacial drift consisting of ground moraine and lenses of sand and gravel outwash from the Illinoian glaciation. The depth to Pennsylvanian-age bedrock is 15 to 60 feet below ground surface (BGS). The bedrock is part of the Modesto Formation, which is composed of many distinguishable layers of sandstone, shale, coal, underclay, and limestones. Bedrock permeability is low, and therefore, bedrock is not used as a source of drinking water (E & E 1990).

Based on straight-line distance, residents Non -responsive Ex. 9 of the Mapco site obtain drinking water from private wells that draw groundwater from the glacial drift aquifer. Residents of the town of Athens obtain water from a municipal groundwater supply. The wells that supply drinking water to Athens are Non -responsive Ex. 9 . Groundwater is found at depths ranging from 36 to 70 feet BGS. Groundwater flow direction, based on surface drainage and regional geology, is assumed to be east to west (E & E 1990).

was detected in the surface water sample at a concentration of 13.6 μg/L, but may not be attributable to the site.

The on-site lagoon, which formerly received wastewater from the agchem operations area, was remediated and backfilled in 1992. There are no longer any direct discharges of materials from the Mapco site to the quarry lake. A sump in the truck filling area collects product spillage and truck rinsewater and no longer discharges to the off-site quarry lake.

The quarry lake is the nearest surface water body to the Mapco site. The lake is located adjacent to the site, on private property owned by Non -responsive Ex. 6. The lake has an outflow at the north end, which discharges to a tributary of Indian Creek. This discharge has been observed to flow at a rate of 2 to 4 gallons per minute (IEPA 1977). Indian Creek is located approximately 500 feet north of the site and flows approximately 10 miles west-northwest to the Sangamon River (USGS 1966a, 1966b, 1970, 1971). There are no known drinking water intakes, wetlands, or aquatic sensitive environments known to exist along the 15-mile downstream surface water migration route. The site is not located on a floodplain (E & E 1990, 1995; USGS 1966a, 1966b, 1970, 1971).

4.3 SOIL EXPOSURE PATHWAY

A release of hazardous substances from the Mapco site to on-site soils has been documented. Six soil samples collected during the 1989 SSI contained concentrations of several TCL/TAL chemicals including volatile organic compounds (VOCs), semivolatile compounds, pesticides, and metals, in excess of background concentrations. The samples were collected from the eastern portion of the site near the former lagoon, and areas of surface drainage toward the quarry lake. Atrazine and Lasso, the herbicides detected in the surface water samples from the former lagoon and the quarry lake, were not detected in on-site soils (E & E 1990).

On-site soils consists of fine-grained materials, underlain by glacial drift. The glacial drift consists of interbedded clays, sand, and gravel (E & E 1990). The site is not fenced and site access is not restricted. Approximately six workers at the Mapco plant may be exposed to potentially contaminated soils. There are no residences, schools, or daycare facilities located within 200 feet of the area of historic soil contamination. Contaminated soils were removed from the site in 1992 by Mapco, Inc. (Mapco 1995). Based on straight-line distance, approximately 52 persons live within a 1-mile radius of the site (E & E 1990).

5. SUMMARY

E & E has evaluated the Mapco site using existing U.S. EPA file information, and information gathered during an FSIP site reconnaissance conducted in April 1995. Mapco, Inc., has been an active agricultural chemical dealer since 1968 (E & E 1990). Soil and surface water sample results show that historic releases of agricultural chemicals to on-site soils and the adjacent, off-site quarry lake have occurred.

The city of Athens obtains drinking water from municipal Non -responsive Ex. 9 [redacted]. The remaining 610 residents obtain water from private wells drawing water from the glacial drift aquifer at a depth of 36 to 70 feet BGS. No on-site groundwater monitoring wells exist; however, groundwater samples collected from four private wells Non -responsive Ex. 9 were found to be free of site-related TCL/TAL chemicals. The potential for past releases to groundwater exists; however, historic waste management practices, which may have adversely impacted the groundwater beneath the site, have been halted. Current waste management practices do not appear to be impacting the groundwater (E & E 1995).

A historic release of hazardous substances to surface water has been documented. Samples collected from the adjacent quarry lake have shown levels of agricultural chemicals. The 1989 sampling of the quarry lake did not reveal any agricultural chemicals related to site activities. The quarry lake may be used as a recreational fishery; however, it is located on private property and unauthorized users would be considered trespassers (E & E 1995). There are no longer any direct discharges from the Mapco site to the quarry lake. The on-site lagoon has been excavated and backfilled with clean soil and is no longer used (IEPA 1991).

No source of soil contamination was noted during the 1995 FSIP reconnaissance inspection. The Mapco site appeared neat and well managed. The site is not fenced and access is not restricted. The chemical storage buildings have locks on the doors to discourage unauthorized access. A private residence Non -responsive Ex. 6 the Mapco

6. REFERENCES

References not included in Appendix C: documents that are currently available within U.S. EPA files; copyrighted documents that are currently available in E & E's library; maps produced by either the United States Geologic Survey or the Illinois State Geologic Survey; and documents created by various state agencies for public use.

Ecology and Environment, Inc. (E & E), April 25, 1995, Mapco Site Reconnaissance Logbook, performed by Ecology and Environment, Inc., Chicago, Illinois.

_____, June 14, 1990, *Screening Site Inspection Report for Mapco Gas Products, Inc., Athens, Illinois*, Chicago, Illinois.

Illinois Environmental Protection Agency (IEPA), 1991, Guidance Manual for Site Remediation at Agricultural Chemical Facilities, Vol. 1.

_____, June 1, 1984a, Memorandum from Ross Manning, IEPA/DWPC, to the Field Operations and Records Unit/DWPC.

_____, April 16, 1984b, Memorandum from Ross Manning, IEPA/DWPC, to the Field Operations and Records Unit/DWP.

_____, October 22, 1980, Memorandum from Timothy R. Kluge, IEPA/DWPC, to the Field Operations and Records Unit/DWPC.

_____, August 3, 1977, Memorandum from Bruce E. Goff, IEPA Division of Water Pollution Control (DWPC), to the Field Operations Section and Records Unit/DWPC.

Mapco Natural Gas Liquids, Inc., May 26, 1995, Letter from Steve Monn, Environmental/Safety Specialist, to Chad Eich, Ecology and Environment, Inc., Buffalo, New York.

United States Geological Survey (USGS), 1971, 7.5 minute series (topographic) quadrangle, Petersbury, Illinois.

_____, 1970, 7.5 minute series (topographic) quadrangle, Salisbury, Illinois

APPENDIX A

SITE RECONNAISSANCE PHOTOGRAPHS

Photo 1 Date: 4/25/95 Time: 11:00 Direction: SE
Site Name: Mapco, Inc.
Comments: Former lagoon area, now vegetated.

Photo 2 Date: 4/25/95 Time: 11:05 Direction: NW
Site Name: Mapco, Inc.
Comments: Bulk fertilizer and pesticide storage tanks, surrounded by concrete berm.

Photo 3 Date: 4/25/95 Time: 11:08 Direction: N
Site Name: Mapco, Inc.
Comments: Concrete lined truck filling area

Photo 4 Date: 4/25/95 Time: 11:10 Direction: N
Site Name: Mapco, Inc.
Comments: Truck filling area.

APPENDIX B

SOIL/SEDIMENT GROUNDWATER AND SURFACE WATER SAMPLE ANALYTICAL DATA

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL SAMPLES

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6
Date	6/13/89	6/13/89	6/13/89	6/13/89	6/13/89	6/13/89
Time	1220	1245	1300	1345	1355	1435
CLP Organic Traffic Report Number	EFP00	EFP01	EFP02	EFP03	EFP04	EFP05
CLP Inorganic Traffic Report Number	MEED56	MEED57	MEED58	MEED59	MEED60	MEED61
Compound Detected (values in µg/kg)						
Volatile Organics						
toluene	9	--	31J	20J	--	37J
chlorobenzene	--	640	--	--	--	--
ethylbenzene	--	48	--	12J	--	--
Semivolatile Organics						
phenol	--	--	280J	--	--	--
naphthalene	--	100J	--	--	--	--
2-methylnaphthalene	--	290J	--	--	--	--
phenanthrene	--	230J	--	92J	--	--
pyrene	--	--	130J	--	--	--
bis(2-ethylhexyl)phthalate	--	210J	420J	230J	490J	--
Pesticides/PCBs						
Aldrin	--	--	1,100JC	--	120	--
Dieldrin	290	79	8,800C	33J	240	--
4,4'-DDT	40J	64	1,300J	60	51	--

Table 4-1 (Cont.)

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6
Analyte Detected (values in mg/kg)						
aluminum	15,200	13,900	22,400	25,900	16,500	13,400
antimony	--	--	--	8.1JBN	--	--
arsenic	5.9	1.9JW	12.1	3.9JW	6.1S	8.8
barium	152	82.4	717	126	129	121
beryllium	0.79B	1.8	1.7	2.5	3.4	0.69B
cadmium	1.4	7.1	7.5	3	13.2	--
calcium	13,000	81,800	40,900	22,300	154,000	5,840
chromium	27	65.6	64.6	266	159	16.6
cobalt	12.2B	11.3B	12.8B	5.7B	7.1B	9.1
copper	36.1	19.8	260	19.9	20.7	22.7
iron	21,500	43,200	78,400	63,800	23,300	21,800
lead	18.7JN	12.3JN	1,250	17.2JsN	18.2J	40.4
magnesium	2,580	6,030	3,960	9,030	8,420	2,650
manganese	750	903	795	251	651	692
mercury	--	--	1.1	--	--	--
nickel	17.7	28.2	41.9	6.5B	25.5	20.9
potassium	3,970	24,600	8,900	98,900	10,800	1,770
selenium	--	--	2S	--	--	--
sodium	--	757B	844	--	--	--
thallium	--	--	--	1.4B	--	--
vanadium	40.8	119	47.7	246	119	32.4
zinc	86.9	407	1,220	91	330	120
cyanide	--	--	0.76	--	--	--

-- Not Detected.

Table 4-2
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SURFACE WATER SAMPLES

Sample Collection Information and Parameters	Sample Number SW1	Duplicate	Blank
Date	6/13/89	6/13/89	6/13/89
Time	1130	1130	1055
CLP Organic Traffic Report Number	EFP11	EFP12	EFP13
CLP Inorganic Traffic Report Number	MEED67	MEED68	MEED69
Temperature (°C)	19	19	11
Specific Conductivity (μmhos/cm)	1,000	1,000	1
pH	9.50	9.50	7.33
Analyte Detected (values in μg/L)			
aluminum	57.1B	67.7	--
arsenic	9.7JBW	9.4JBW	--
barium	5.5B	5.4B	--
calcium	39,500	39,000	--
copper	13.9JB	12.1JB	9.3JB
iron	91.6B	79.8B	--
magnesium	42,000	41,600	--
potassium	180,000	178,000	--
sodium	8,920	9,270	--
vanadium	5.8B	5.2	--
zinc	12.8JB	6.9JB	8.9JB
cyanide	13.6	--	--

-- Not detected.

Table 4-3
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED RESIDENTIAL WELL SAMPLES

Sample Collection Information and Parameters	Sample Number RW1	RW2	Duplicate	RW3	RW4	Blank
Well Depth (Feet)	56	Not Known	NA	Not Known	41	NA
Date	6/13/89	6/13/89	6/13/89	6/13/89	6/13/89	6/13/89
Time	1100	1415	1145	1200	1415	1135
CLP Organic Traffic Report Number	EFP06	EFP07	EFP08	EFP09	EFP10	EFP14
CLP Inorganic Traffic Report Number	MEED62	MEED63	MEED64	MEED65	MEED66	MEED70
Temperature (°C)	11	10	11	6	10	13
Specific Conductivity (µmhos/cm)	500	900	400	500	900	0
pH	7.18	7.24	7.76	7.30	7.24	6.26
Compound Detected (values in µg/L)						
Semivolatile Organics						
diethylphthalate	--	--	--	--	0.4J	--
Analyte Detected (values in µg/L)						
aluminum	--	104J	--	--	--	88JB
antimony	--	7.8JN	--	--	--	--
barium	44.9B	83.5	83.8	64.2	26.6B	--
calcium	97,600	148,000	138,000	101,000	52,400	--
copper	--	--	--	--	15.1J*	--
lead	1.4JB	0.67JB	--	--	1.7JB	0.70JB
magnesium	47,000	78,700	72,600	53,200	27,000	--
manganese	7.8B	--	6.0B	6.2B	--	--
nickel	67.3J	55.1J	68J	83.7J	60.7J	25.6
potassium	594B	746B	670B	632B	518B	--
selenium	--	2.2J*	3.3J*	3.5J*	4.5J*	3.3*
silver	4.8JNB	--	25.4JN	--	--	--
sodium	11,400	13,600	12,600	9,710	4,720	--
zinc	55.6J*	--	--	--	222J*	--

N t applicable.
-- Not detected.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: August 3, 1977

TO: Field Operations Section and Records Unit/DWPC

FROM: Bruce E. Goff, Region III Springfield, FOS/DWPC

SUBJECT: MAPCO, Inc. - Herbicide Discharge
(Menard County, near Athens) Complaint C-128

On the above date, this writer accompanied by Engineer Jay Rankin investigated a complaint initiated by Mr. Jim Watkins that MAPCO, Inc., rinses fertilizer and herbicide trucks into a quarry pit.

Mr. Loren E. Hopwood, Vice-President of MAPCO, Inc., was contacted. MAPCO, Inc., is a custom fertilizer and chemical applicator. When informed about the complaint, he denied that rinse waters from the washing of their spray trucks was discharged to the lake located east of the plant. He indicated that when they change to different herbicides in their sprayers, the sprayers are backed up to fence rows and flushed out.

Mr. Hopwood showed this writer around the facility. Mr. Hopwood indicated that he owned the lake and the surrounding property. The lake was formed by a quarrying operation. A good portion of the surface runoff at the facility would get into the lake. A four (4) inch pipe was observed on the west bank of the lake. Mr. Hopwood indicated that the pipe was connected to a drain near where the spray trucks were filled with chemicals. The drain was observed. It drained a small concrete pad where the spray trucks were loaded. Apparently any spillage from filling the sprayers with chemicals is collected on the pad and goes down the drain to the lake. Mr. Hopwood maintained that only incidental spillage from the filling of the sprayers would get into the drain and subsequently into the lake. He maintained that no trucks were rinsed or washed and the resulting water discharged to the lake.

The lake was observed more closely. The lake has a surface area of approximately 20 acres. It has a discharge at the north end (see attached sketch). This discharge is tributary to Indian Creek. The lake had no adnormal coloration or other visual characteristics. The lake had a discharge of approximately two or four gallons per minute. A sample of the discharge was collected and upon analysis the following laboratory results were obtained:

Ammonia (N)	0.2 mg/l
Alachlor (Lasso)	0.24 ug/l
Atrazine	14.0 ug/l

On September 9, 1977, Mr. Jim Watkins was contacted by telephone. This writer explained to Mr. Watkins the initial results of the investigation. Mr. Watkins stated that he worked for Mr. Hopwood as a spray truck driver in 1976 and he knew exactly what MAPCO did with the rinse waters. He indicated that he would rinse his spray tank out with about 200 gallons of water whenver they would switch from Atrazene or Sutan to Treflan. This rinse water would be discharged to the ground around the facility and flow down a ditch to the lake. He also indicated that

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY--DIVISION OF WATER POLLUTION CONTROL

24

SPECIAL ANALYSIS FORM 008769

Time Collected 10 am

Sub-Basin Region 5

Date Collected 10/22/80

Collector J. Kluge

Facility Name: MAFCO Fertilizer

Facility Number:

File Town

Stream Name(s)

Stream Code:

Source of Sample: (Exact Location) Hose bibb near shop - reportedly pumped from quarry into east of plant

Physical Observations, Remarks: Clear

Flow	Field Dissolved Oxygen	Field pH	Field Temp.

Pesticide scan

Lasso = 15. ug/l (PPb)

Transported by: J. Kluge

Received by:

Transported by:

Received by:

Results in mg/l unless otherwise noted.

100% Recycled Paper

FOR LAB USE ONLY

Lab Number: 008769 Rec'd by: J. F

Date sample rec'd: 10/22/80 Time:

Date analysis completed:

Date results forwarded: 1-13-81

Total Tests requested: Tests run

Lab Section: Spfld Supervisor: J. Hunter

recycled paper

ecology and environment

1K

Illinois Environmental Protection Agency

SPECIAL ORGANIC ANALYSIS FORM

D018768

Date Received Oct 22, 19

Division WPC

Sub-Basin

Time Collected

Collector

Date Collected

Mail Report To:

Facility Name:

Facility Number:

File Town:

Stream Name(s)

Stream Code:

Source of Sample: (Exact Location) MAPCO Fertilizer - Lagoon

Physical Observations, Remarks:

Analysis Requested: Pesticides

Flow	Field Dissolved Oxygen	Field PH	Field Temp.

LABORATORY

Lasso = 2200. ug/l (PPb)

Transported by:

Received by:

Transported by:

Received by:

FOR LAB USE ONLY

Lab Number: D018768 Rec'd by: DE

Date sample rec'd: Oct 22, 80 Time:

Date analysis completed:

Date results forwarded: 2-13-81

Total Tests requested: Test run:

Lab Section: Supervisor

APPENDIX C

REFERENCE DOCUMENTATION

MAPCO NATURAL GAS LIQUIDS INC.

May 26, 1995

Mr. Chad Eich
Ecology and Environment, Inc.
Buffalo Corporate Center
368 Pleasantview Drive
Lancaster, New York 14086

Re: Thermogas Company - Athens, Illinois, and your site visit on April 25, 1995

Dear Mr. Eich:

Relative to subject Thermogas facility and our conversations during your site visit on April 25, 1995, following receipt of a report from the US EPA, stamp dated September 26, 1990, Thermogas Company reviewed the report and began steps toward addressing the concerns stated in the report. Specific recommendations made in the report, and corrective actions taken, were:

- **recommendation was** - the collection lagoon, which had previously been used for the capture of rinse water from the agchem operation and for the receipt of sanitary waste from a septic tank, should be abandoned completely

  corrective actions taken were - the design of an operational containment load pad and secondary containment for bulk liquid fertilizer and pesticide storage tanks was permitted by the Illinois Environmental Protection Agency and installed to handle rinse water from the agchem operation, the lagoon was abandoned, and later completely remediated (discussed below), and a septic tank and lateral lines were installed to handle sanitary waste

- **recommendation was** - an alternate sewage disposal system should be provided

  corrective action taken was - as stated above, a septic tank and lateral lines were installed to handle sanitary waste

- **recommendation was** - a concrete pad and spill collection system should be provided at the chemical mixing and loading areas so that spill material can be contained and recycled or properly disposed

  corrective action taken was - as stated above, full operational and secondary containment was installed, first under an Illinois Environmental Protection Agency permit, and then when the program changed hands, permitted a second time with the Illinois Department of Agriculture; part of the permitting with the Department of Agriculture addressed the reuse/disposal of recovered spills and rinse water

- **recommendation was** - site security should be provided

  corrective actions taken were - all outbuildings were furnished with locking doors, and locking valves were installed on all storage tanks; the bulk propane storage tank was already completely surrounded by a locked fence.

In late spring 1992, Thermogas Company management, in consultation with a local (Springfield, Illinois) consulting firm knowledgeable in both agchem facility operations and environmental investigation/remediation, embarked on an extremely aggressive remediation program at the facility. When remediation was complete, over 12,000 tons of soil had been removed from the site. Approximately 3782 tons were land applied to cropland under a permit issued by the Illinois Department of Agriculture, and an additional 8671 tons were disposed in an area landfill under full, special waste permitting requirements.

Areas remediated included the former lagoon, where approximately 9540 tons were removed. This activity resulted in the excavation of a hole measuring 126' north to south, 75' west to east and approximtely 22' deep. The other +/- 3000 tons came from excavation of soils from areas of surface drainage away from the agchem operational area, and from excavation of an area where a new dry fertilizer storage building was proposed to be built in the near future, and from excavation of the area leading from the new operational load pad toward the former lagoon. In addition, soils which had been previously excavated, and subsequently stockpiled on-site, from the area where the operational and secondary containment structures were installed were also removed, and the ground beneath the stockpiles was likewise remediated. Remediation in all of the various areas continued until confirmation samples analyzed by a local laboratory following US EPA methodology showed the excavated areas to be clean. From start to finish, including the disposal of soils in the special waste landfill, thirteen months had passed, from June of 1992 until July of 1993. Enclosed please find a drawing prepared by our consultant which shows the main areas excavated.

In closing, Thermogas Company and parent company MAPCO NATURAL GAS LIQUIDS Inc. are confident that the facility has been fully remediated. Furthermore, with the operational and secondary containment structures now in place, there will be no future spills and/or releases to the environment.

If there are any questions with regard to this transmittal, please call me at 918/581-1934. Thermogas Company is hopeful that this information will allow Ecology and Environment, Inc. to propose site closure to US EPA. If additional information or detail is required in order for closure to be proposed, please call and I will provide the necessary additional documentation.

Sincerely,

Steve W. Monn

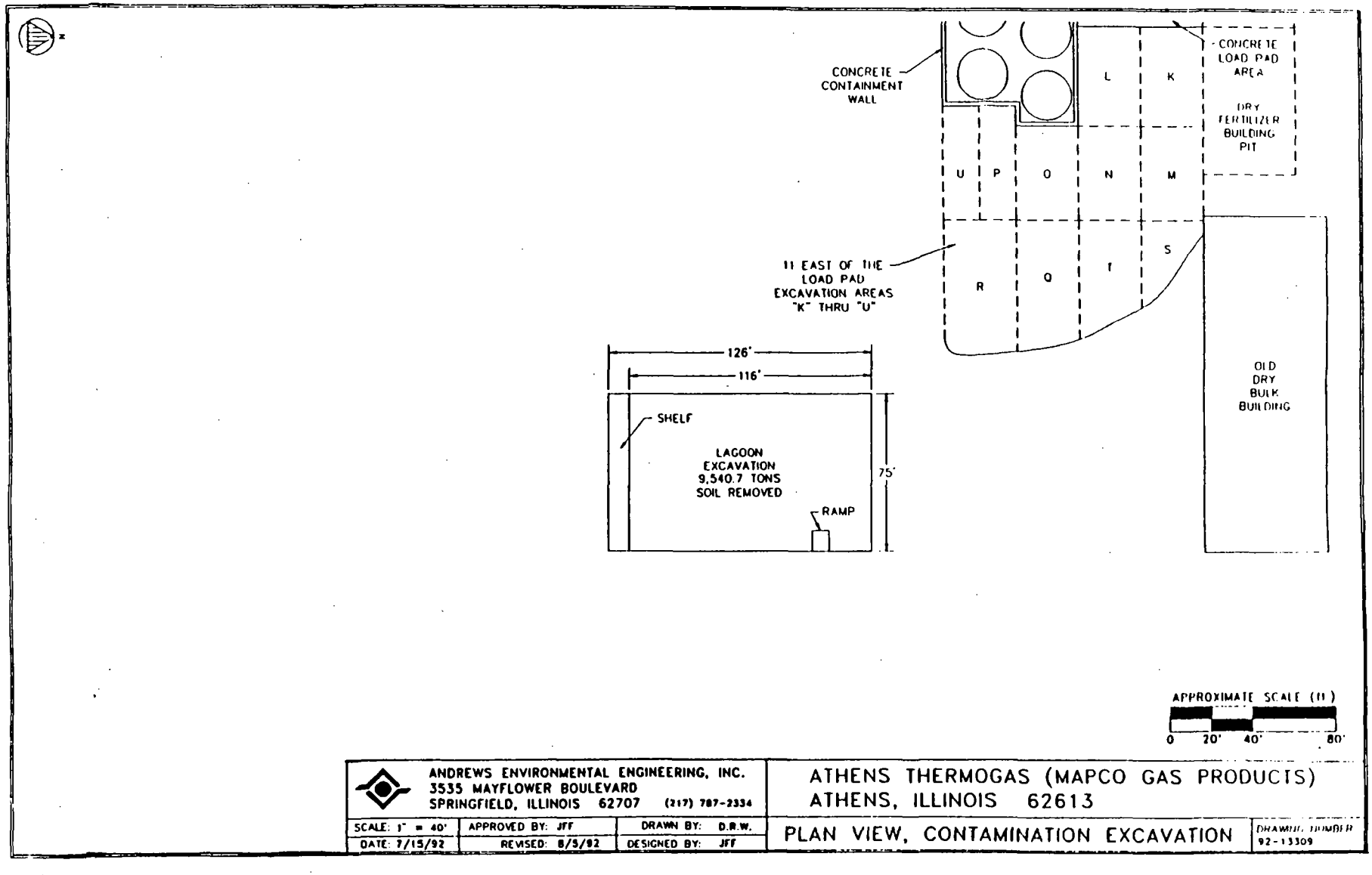
SWM:swm
#0310525.95

e: Gus Wilson
Harold Langdon
Doug Rinke
Terry LeClair
Royse Parr

c: Mike Ingram, plant #031

David M. Favero
FAVERO GEOSCIENCES
Springfield, Illinois

NOTE: "OLD DRY BULK BUILDING" has since been removed (the concrete flooring remains as a parking area), and "DRY FERTILIZER BUILDING PIT" refers to the area excavated in preparation for the construction of the "NEW DRY FERTILIZER STORAGE BUILDING" (see attached letter dated 05/26/95)



ecology and environment, inc.
International Specialists in the Environment

Job Number ZT3051
EIL0483VAA

MAPCO, INC SITE.
FSIP SITE RECONNAISSANCE
INDIAN POINT RD.
ATHENS, IL

E & E Job Number ZT3051 E1L0483VAA

Telephone Code Number 02763

Site Name MAPCO, INC.

City/State ATHENS, IL.

TDD T05-9503-205

PAN

SSID

Start/Finish Date 4/25/95 / 4/25/95

Book 1 of 1

E & E Emergency Response Center: (716) 684-8940
E & E Corporate Center: (716) 684-8060
MEDTOX Hotline: (501) 370-8263
E & E Safety Director (Home): (716) 655-1260

TUESDAY APRIL 25, 1995

0940 E+E TATM's CHAD EICH + BOB MEYERS ARRIVE AT THE MAPCO, INC. SITE, TO CONDUCT AN FSIP SITE RECONNAISSANCE.

TAT FOLLOWED STEVE MONN - PLANT MGR. FOR SMITHFIELD THERMOGAS, FROM SMITHFIELD FSIP SITE, TO MAPCO.

THE MAPCO PLANT IS ALSO KNOWN AS INDIAN POINT THERMOGAS.

TAT WAS INTRODUCED TO MR. MIKE INGRAM, MAPCO PLANT MGR.

THE SITE WAS PURCHASED BY MAPCO IN 1968.

NO DRY BLENDING IS DONE ON-SITE.

THE SITE APPEARED NEAT AND WELL MAINTAINED. A NEWLY EXCAVATED + CONCRETE LINED + BERMED AREA WAS OBSERVED BETWEEN THE OFFICE BUILDING + THE MIXING BUILDING. THIS WILL BE ADDITIONAL BULK STORAGE AREA. THE EXCAVATED SOILS ARE STOCKPILED ON-SITE, AWAITING

4/25/95

A PERMIT FOR LANDFILLING.

THE SITE HAS UNDERGONE A LOT OF REMEDIATION.

THE EAST SIDE OF THE TRUCK FILLING AREA + THE AREA BENEATH THE NEW DRY STORAGE BUILDING WAS SAMPLED + EXCAVATED TILL CLEAN. TRUCK FILLING AREA WAS LINED W/ CONCRETE + A SUMP WAS INSTALLED TO CATCH SPILLAGE + RINSEWATER WHICH IS THEN REUSED. THE FORMER LAGOON WAS EXCAVATED IN 1992. CONFIRMATION SAMPLES WERE COLLECTED, + THE LAGOON BACKFILLED. THE AREA BETWEEN THE LAGOON + TRUCK FILLING AREA WAS ALSO REMEDIATED.

APPROX. 12,000 yds^3 OF SOIL WAS REMOVED + TAKEN TO A LANDFILL OR LAND APPLIED (UNDER A PERMIT)

A CONSULTANT WAS HIRED TO CONDUCT THE REMEDIAL INVESTIGATION

4/25/95

S. MONN SAID THE IEPA REQUIRED MAPCO TO INSTALL THE LAGOON IN 1981 OR 1982 TO COLLECT RINSEWATER.

THE BULK FERTILIZER + PESTICIDE ABOVE GROUND TANKS ARE CONTAINED BY A 3' CONCRETE WALL.

NO SPILLS, DISCOLORED SOILS, OR DISCHARGES WERE OBSERVED.

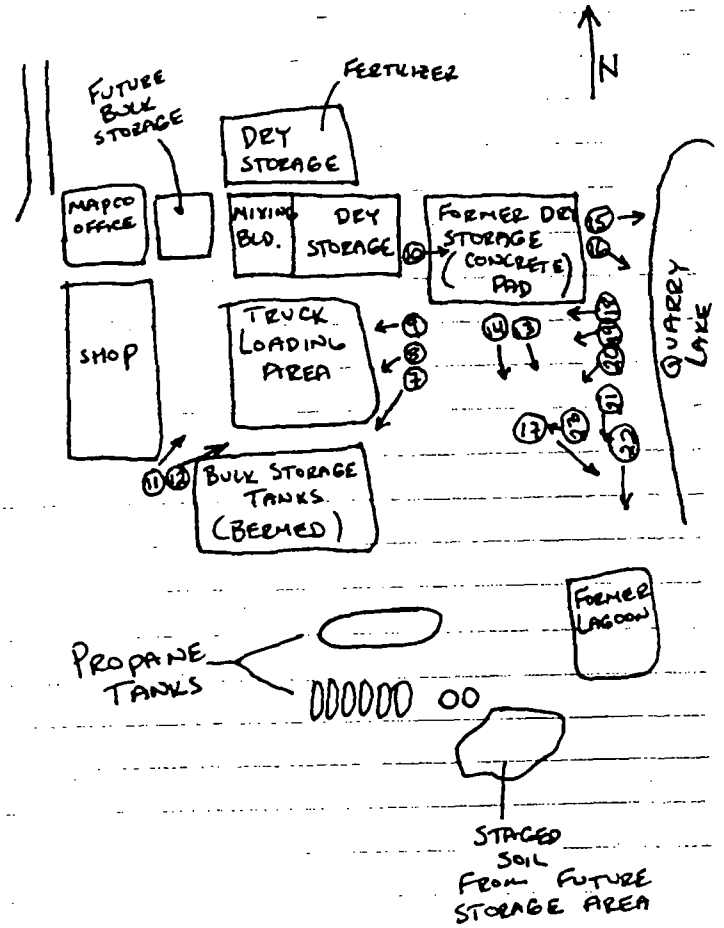
THE LAGOON IS BACKFILLED + MOSTLY VEGETATED.

NO DISCHARGES TO THE QUARRY LAKE WERE OBSERVED.

EMPLOYEES AT THE MAPCO PLANT DRINK BOTTLED WATER.

THE NEIGBORING BUSINESS, PT+E, HAS A PRIVATE WELL FOR USE IN BATHROOM. THE DEPT. OF HEALTH HAS SAMPLED THE WELL + SAID ITS OK. (UNKNOWN WHAT PARAMETERS WERE SAMPLED FOR).

4/25/95



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